What is claimed is:

1. A flow through injection valve, said flow through injection valve comprising:

a stationary member;

a movable member, a surface of said stationary member interfacing with a surface of said movable member; and

at least one pin isolation valve;

said at least one pin isolation valve having a flow through internal conduit,

said at least one pin isolation valve movably disposed so that said internal conduit is capable of fluidically communicating with at least one flow through conduit in said movable member,

said at least one pin isolation valve movably disposed so that said internal conduit is capable of fluidically communicating with another flow through conduit in said movable member.

2. The flow through injection valve according to claim 1 wherein said movable member comprises:

first and second conduits for interfacing with internal conduits of first and second pin isolation valves, said first and second conduits opening to a surface of said movable member ;

a third conduit enabling fluidic communication between said internal conduits of said first and second pin isolation valves; and

a fourth conduit enabling fluidic communication between internal conduits of third and fourth pin isolation valves, said third pin isolation valve providing fluid flow, said fourth pin isolation valve exhausting said fluid flow.

3. The flow through injection valve according to claim 1, wherein

said movable member moves by rotation around an axis of rotation.

4. The flow through injection valve according to claim 1, wherein said movable member moves by at least one of linear and curvilinear translation.

5. The flow through injection valve according to claim 1, wherein one of said at least one pin isolation valves is fluidically coupled to a sample loop of a high pressure liquid chromatography (HPLC) system.

6. The flow through injection valve according to claim 1, wherein one of said at least one pin isolation valves is in fluidic communication with a pump supplying high pressure liquid to a high pressure liquid chromatography (HPLC) system.

7. The flow through injection valve according to claim 1, wherein one of said at least one pin isolation valves is fluidically coupled to a column discharging high pressure liquid from a high pressure liquid chromatography (HPLC) system.

8. A flow through injection valve,

said injection valve disposed around an axis of rotation, said injection valve comprising:

at least two opposing valve ends disposed around the axis of rotation;

a movable member comprising a rotor disposed between said valve ends, an axis of rotation of said rotor being one of parallel and coincident with the axis of rotation of said injection valve, said rotor disposed such that orientation of said rotor can change by rotation around the axis of rotation of said rotor,

said rotor having

an outer surface;

at least two opposing surfaces each intersecting said outer surface;

a first flow-through conduit having an opening on a first of said at least two opposing surfaces and an opening on a second of said at least two opposing surfaces;

a second flow-through conduit having an opening on a first of said at least two opposing surfaces and an opening on a second of said at least two opposing surfaces;

a flow through conduit having an opening on said outer surface and an opening on said first of said at least two opposing surfaces;

a flow through conduit having an opening on said outer surface and an opening on said second of said at least two opposing surfaces;

a first sealing annulus for sealing said openings on said first of said at least two opposing surfaces;

a second sealing annulus for sealing said openings on said second of said at least two opposing surfaces;

a first pin isolation valve having an internal conduit, said first pin isolation valve disposed to move parallel to the axis of rotation of said injection valve, said first pin isolation valve movably disposed so as to be capable of fluidically communicating, through said internal conduit, with said opening on said first flow-through channel on said first of said at least two opposing surfaces,

said first pin isolation valve movably disposed so as to be capable of fluidically communicating, through said internal conduit, with said flow through conduit having an opening on said outer surface and an opening on said second of said at least two opposing surfaces;

a second pin isolation valve having an internal conduit, said second pin isolation valve disposed to move parallel to the centerline of said injection valve,

said second pin isolation valve movably disposed so as to be capable of fluidically communicating, through said internal conduit, with said opening on said first flow-through channel on said second of said at least two opposing surfaces,

said second pin isolation valve movably disposed so as to be capable of fluidically communicating, through said internal conduit, with said flow through conduit having an opening on said outer surface and an opening on said second of said at least two opposing surfaces;

a third pin isolation valve having an internal conduit, said third pin isolation valve disposed to move parallel to the centerline of said injection valve,

said third pin isolation valve movably disposed so as to be capable of fluidically communicating, through said internal conduit, with said opening on said second flow-through channel on said first of said at least two opposing surfaces,

said third pin isolation valve movably disposed so as to be capable of fluidically communicating, through said internal conduit, with said flow through conduit having an opening on said outer surface and an opening on said second of said at least two opposing surfaces; and

a fourth pin isolation valve having an internal conduit, said fourth pin isolation valve disposed to move parallel to the centerline of said injection valve,

said fourth pin isolation valve movably disposed so as to be capable of fluidically communicating, through said internal conduit, with said opening on said second flow-through channel on said second of said at least two opposing surfaces,

said fourth pin isolation valve movably disposed so as to be capable of fluidically communicating, through said internal conduit, with said flow through conduit having an opening on said outer surface and an opening on said second of said at least two opposing surfaces.

9. The flow through injection valve according to claim 8, wherein said rotor further comprises:

a rotor clamp having an outer surface and an inner surface, the inner surface surrounding at least a portion of the outer surface of said rotor;

a first opening on the outer surface of said rotor clamp penetrating said rotor clamp to coincide with said first opening on said outer surface of said rotor; and

a second opening on the outer surface of said rotor clamp penetrating said rotor clamp to coincide with said second opening on said outer surface of said rotor.

10. The flow through injection valve according to claim 9, wherein said rotor clamp further comprises drive means for driving said rotor to rotate around the axis of rotation of said rotor.

11. The flow through injection valve according to claim 10, wherein said rotor clamp drive means comprises a gear drive operator.

12. The flow through injection valve according to claim 10, wherein said rotor clamp drive means comprises a handle operator.

13. The flow through injection valve according to claim 8, wherein at least one of said valve ends comprises:

a stator enclosing said at least one pin isolation valve,

said stator adjacent to said rotor;

a sealing layer enclosed within said stator and enclosing said at least one pin isolation valve for sealing said at least one pin isolation valve;

a Belleville spring washer;

a Belleville spring;

a load washer; and

a spherical nut,

said Belleville spring washer, said Belleville spring, said load washer and said spherical nut axially arranged to impose an axial force for sealing said sealing layer enclosing said pin isolation valve.

14. The flow through injection valve according to claim 13, wherein said sealing layer is comprised of at least one of PEEK (polyetheretherketone) and PTFE (polytetrafluorethylene)

15. The flow through injection valve according to claim 8, wherein said rotor is comprised of PEEK blend.

16. The flow through injection valve according to claim 9, wherein said rotor clamp is comprised of stainless steel.

17. The flow through injection valve according to claim 16, wherein said stainless steel is Type 316 stainless steel.

18. The flow through injection valve according to claim 8, wherein either of said first and second pin isolation valves is fluidically coupled to a sample loop of a high pressure liquid chromatography (HPLC) system.

19. The flow through injection valve according to claim 8, wherein either of said third and fourth pin isolation valves is in fluidic communication with a pump supplying high pressure liquid to a high pressure liquid chromatography (HPLC) system.

20. The flow through injection valve according to claim 8, wherein either of said third and fourth pin isolation valves is in fluidic communication with a column discharging high pressure liquid to a high pressure liquid chromatography (HPLC) system.

21. A flow through injection valve comprising:

a stationary member and a movable member interfacing at a surface, said movable member disposed to slide along said surface;

a chamber disposed between said stationary member and said movable member, said chamber bounded by said surface;

said movable member having a first flow through conduit having a first opening interfacing with said chamber and a second opening on a surface of said movable member not interfacing with said chamber,

said movable member having a second flow through conduit having a first opening interfacing with said chamber and a second opening on a surface of said movable member not interfacing with said chamber,

said movable member having a third flow through conduit having a first opening and a second opening each on a surface of said movable member interfacing with said chamber; and

said movable member having a fourth flow through conduit having a first opening and a second opening each on a surface of said movable member interfacing with said chamber.

22. The flow through injection valve according to claim 21, further comprising:

at least one of a (a) first pin isolation valve, (b) second pin isolation valve, (c) third pin isolation valve, and (d) fourth pin isolation valve;

said first pin isolation valve having an internal conduit,

said first pin isolation valve movably disposed within an opening within said stationary member interfacing with said chamber so that said internal conduit can be in fluidic communication with said first opening on said first flow through conduit of said movable member,

said first pin isolation valve movably disposed so that said internal conduit can be in fluidic communication with said first opening of said third conduit within said chamber,

said second pin isolation valve having an internal conduit,

said second pin isolation valve movably disposed within an opening within said stationary member interfacing with said chamber so that said internal conduit can be in fluidic communication with said first opening on said second flow through conduit of said movable member,

said second pin isolation valve movably disposed so that said internal conduit can be in fluidic communication with said first opening on said second flow through conduit of said movable member,

said third pin isolation valve having an internal conduit,

said third pin isolation valve movably disposed within an opening within said stationary member interfacing with said chamber so that said internal conduit can be in fluidic communication with said first opening of said fourth flow through conduit,

said third pin isolation valve movably disposed so that said internal conduit can be in fluidic communication with said first opening of said first flow through conduit,

said fourth pin isolation valve having an internal conduit,

said fourth pin isolation valve movably disposed within an opening within said stationary member interfacing with said chamber so that said internal conduit can be in fluidic communication with said second opening of said fourth flow through conduit,

said fourth pin isolation valve movably disposed so that said internal conduit can be in fluidic communication with said second opening of said second flow through conduit.

23. The flow through injection valve according to claim 21, further comprising a housing enclosing said stationary member and said movable member.

24. The flow through injection valve according to claim 22, further comprising a housing enclosing said stationary member and said movable member and at least one of said pin isolation valves, said internal conduit of said at least one pin isolation valve fluidically coupled to a conduit penetrating said housing.

25. The flow through injection valve according to claim 21, further comprising driving means for driving at least one of said movable members.

26. The flow through injection valve according to claim 25, wherein said driving means is a linear electric motor.

27. The flow through injection valve according to claim 21, wherein either of said first and second pin isolation valves of said flow through injection valve is fluidically coupled to a sample loop of a high pressure liquid chromatography (HPLC) system.

28. The flow through injection valve according to claim 21, wherein either of said third and fourth pin isolation valves of said flow through injection valve is in fluidic communication with a pump supplying high pressure liquid to a high pressure liquid chromatography (HPLC) system.

29. The flow through injection valve according to claim 21, wherein either of said third and fourth pin isolation valves of said flow through injection valve is in fluidic communication with a column discharging high pressure liquid from a high pressure liquid chromatography (HPLC) system.

30. The flow through injection valve according to claim 23, wherein said housing of said flow through injection valve is capable of retaining pressure greater than atmospheric pressure.

31. The flow through injection valve according to claim 4, wherein said movable member is comprised of PEEK (polyetheretherketone) blend.

32. The flow through injection valve according to claim 4, wherein said movable member consists of at least one of (a) metal, (b) polymer, and (c) sapphire.

33. The flow through injection valve according to claim 4, wherein said interfacing surface between said stationary member and said movable member of said linear injection valve is sealed by at least one lip seal.

34. The flow through injection valve according to claim 21, wherein at least one of said openings of said pin isolation valves is sealed by a lip seal.

35. The multiple valve according to claim 33, wherein said lip seal is self-energizing.

36. The multiple valve according to claim 34, wherein said lip seal is self-energizing.

37. A multiple valve comprised of:

a housing;

a rotary flow through isolation valve disposed within said housing, said isolation valve oriented in an axial direction for isolation of fluid flow ,

said isolation valve disposed around a centerline oriented in an axial direction, said isolation valve comprising:

at least two opposing valve ends disposed around the centerline;

a rotor disposed between said valve ends, a centerline of said rotor being substantially parallel and coincident with the centerline of said isolation valve, said rotor disposed such that orientation of said rotor can change by rotation around the centerline of said rotor, said rotor having

an outer surface;

at least two opposing surfaces each intersecting said outer surface;

a flow-through conduit having an opening on a first of said at least two opposing surfaces and an opening on a second of said at least two opposing surfaces;

a flow through conduit having an opening on said outer surface and an opening on said first of said at least two opposing surfaces,

a flow through conduit having an opening on said outer surface and an opening on said second of said at least two opposing surfaces,

at least one blank opening on said first of said at least two opposing surfaces,

at least one blank opening on said second of said at least two opposing surfaces,

a first sealing annulus for sealing said openings on said first of said at least two opposing surfaces; and

a second sealing annulus for sealing said openings on said second of said at least two opposing surfaces

a first pin isolation valve, said first pin isolation valve disposed to move along the centerline of said isolation valve,

said first pin isolation valve movably disposed so as to be capable of fluidically communicating with said at least one blank opening on said first of said at least two opposing surfaces,

said first pin isolation valve movably disposed so as to be capable of fluidically communicating with said flow through conduit having an opening on said outer surface and an opening on a second of said at least two opposing surfaces;

a second pin isolation valve, said second pin isolation valve disposed to move along the centerline of said isolation valve;

said second pin isolation valve movably disposed so as to be capable of fluidically communicating with said at least one blank opening on said second of said at least two opposing surfaces,

said second pin isolation valve movably disposed so as to be capable of fluidically communicating with said flow through conduit having an opening on said outer surface and an opening on said second of said at least two opposing surfaces; and

a rotary flow through injection valve disposed within said housing for isolation of the fluid flow to a downstream receptacle,

said injection valve disposed around a centerline oriented in an axial direction, said injection valve comprising:

at least two opposing valve ends disposed around the centerline;

a rotor disposed between said valve ends, a centerline of said rotor being one of parallel and coincident with the centerline of said injection valve,

said rotor disposed such that orientation of said rotor can change by rotation around the centerline of said rotor,

said rotor having

an outer surface;

at least two opposing surfaces each intersecting said outer surface;

a first flow-through conduit having an opening on a first of said at least two opposing surfaces and an opening on a second of said at least two opposing surfaces;

a second flow-through conduit having an opening on a first of said at least two opposing surfaces and an opening on a second of said at least two opposing surfaces; a flow through conduit having an opening on said outer surface and an opening on said first of said at least two opposing surfaces;

a flow through conduit having an opening on said outer surface and an opening on said second of said at least two opposing surfaces;

a first sealing annulus for sealing said openings on said first of said at least two opposing surfaces;

a second sealing annulus for sealing said openings on said second of said at least two opposing surfaces;

a first pin isolation valve having an internal conduit, said first pin isolation valve disposed to move parallel to the centerline of said injection valve, said first pin isolation valve movably disposed so as to be capable of fluidically communicating with said opening on said first flow-through channel on said first of said at least two opposing surfaces,

said first pin isolation valve movably disposed so as to be capable of fluidically communicating with said flow through conduit having an opening on said outer surface and an opening on said second of said at least two opposing surfaces;

a second pin isolation valve having an internal conduit, said second pin isolation valve disposed to move parallel to the centerline of said injection valve,

said second pin isolation valve movably disposed so as to be capable of fluidically communicating with said opening on said first flow-through channel on said second of said at least two opposing surfaces,

said second pin isolation valve movably disposed so as to be capable of fluidically communicating with said flow through conduit having an opening on said outer surface and an opening on said second of said at least two opposing surfaces;

a third pin isolation valve having an internal conduit, said third pin isolation valve disposed to move parallel to the centerline of said injection valve,

said third pin isolation valve movably disposed so as to be capable of fluidically communicating with said opening on said second flow-through channel on said first of said at least two opposing surfaces,

said third pin isolation valve movably disposed so as to be capable of fluidically communicating with said flow through conduit having an opening on said outer surface and an opening on said second of said at least two opposing surfaces; and

a fourth pin isolation valve having an internal conduit, said fourth pin isolation valve disposed to move parallel to the centerline of said injection valve

said fourth pin isolation valve movably disposed so as to be capable of fluidically communicating with said opening on said second flow-through channel on said second of said at least two opposing surfaces,

said fourth pin isolation valve movably disposed so as to be capable of fluidically communicating with said flow through conduit having an opening on said outer surface and an opening on said second of said at least two opposing surfaces.

38. The multiple valve according to claim 37, wherein said first pin isolation valve of said rotary flow through isolation valve is fluidically coupled to said third pin isolation valve of said rotary flow through injection valve.

39. The multiple valve according to claim 37, wherein said second pin isolation valve of said rotary flow through isolation valve is fluidically coupled to said fourth pin isolation valve of said rotary flow through injection valve.

40. The multiple valve according to claim 37, wherein either of said rotors further comprises:

a rotor clamp having an outer surface and an inner surface, the inner surface surrounding at least a portion of the outer surface of said rotor ,

a first opening on the outer surface of said rotor clamp penetrating said rotor clamp to coincide with said first opening on said outer surface of said rotor, and

a second opening on the outer surface of said rotor clamp penetrating said rotor clamp to coincide with said second opening on said outer surface of said rotor.

41. The multiple valve according to claim 40, wherein said rotary flow through isolation valve further comprises at least one of a (a) third pin isolation valve, and (b) fourth pin isolation valve;

said third pin isolation valve having an internal conduit, said rotary flow through third pin isolation valve disposed within said first opening on said outer surface of said rotor clamp so that said internal conduit of said third pin isolation valve is disposed to be in fluidic communication with said opening on said outer surface of said flow through conduit having an opening on said outer surface and an opening on said first of said at least two surfaces intersecting said outer surface of said rotor,

said fourth pin isolation valve having an internal conduit, said fourth pin isolation valve disposed within said second opening on said outer surface of said rotor clamp so that said internal conduit of said fourth pin isolation valve is disposed to be in fluidic communication with said opening on said outer surface of said flow through conduit having an opening on said outer

surface and an opening on said second of said at least two surfaces intersecting said outer surface of said rotor.

42. The multiple valve according to claim 40, wherein said rotor clamp further comprises drive means for driving said rotor to rotate around the centerline of said rotor.

43. The multiple valve according to claim 42, wherein said rotor clamp drive means comprises a gear drive operator.

44. The multiple valve according to claim 42, wherein said rotor clamp drive means comprises a handle operator.

45. The multiple valve according to claim 37, wherein at least one of said valve ends comprises:

a stator enclosing said at least one pin isolation valve,

said stator adjacent to said rotor;

a sealing layer enclosed within said stator and enclosing said at least one pin isolation valve for sealing said at least one pin isolation valve;

a Belleville spring washer;

a Belleville spring;

a load washer; and

a spherical nut,

said Belleville spring washer, said Belleville spring, said load washer and said spherical nut axially arranged to impose an axial force for sealing said sealing layer enclosing said pin isolation valve.

46. The multiple valve according to claim 45, wherein said sealing layer is comprised of at least one of PEEK (polyetheretherketone) and PTFE (polytetrafluorethylene)

47. The multiple valve according to claim 37, wherein at least one of said rotors is comprised of PEEK blend.

48. The multiple valve according to claim 40, wherein said rotor clamp is comprised of stainless steel.

49. The multiple valve according to claim 48, wherein said stainless steel is Type 316 stainless steel.

50. The multiple valve according to claim 37, wherein either of said first and second pin isolation valves of said rotary flow through injection valve is fluidically coupled to a sample loop of a high pressure liquid chromatography (HPLC) system.

51. The multiple valve according to claim 41, wherein either of said third and fourth pin isolation valves of said rotary flow through isolation valve is fluidically coupled to a pump supplying high pressure liquid to a high pressure liquid chromatography (HPLC) system.

52. The multiple valve according to claim 41, wherein either of said third and fourth pin isolation valves of said rotary flow through isolation valve is fluidically coupled to a column discharging high pressure liquid to a high pressure liquid chromatography (HPLC) system.

53. A multiple valve comprised of:

a housing;

a rotary flow through isolation valve disposed within said housing, said isolation valve oriented in an axial direction for isolation of fluid flow ,

said isolation valve disposed around an axis of rotation, said isolation valve comprising:

at least two opposing valve ends disposed around the axis of rotation;

a rotor disposed between said valve ends, an axis of rotation of said rotor being substantially parallel and coincident with the axis of rotation of said isolation valve, said rotor disposed such that orientation of said rotor can change by rotation around the axis of rotation of said rotor, said rotor having

an outer surface,

at least two opposing surfaces each intersecting said outer surface;

a flow-through conduit having an opening on a first of said at least two opposing surfaces and an opening on a second of said at least two opposing surfaces;

a flow through conduit having an opening on said outer surface and an opening on said first of said at least two opposing surfaces;

a flow through conduit having an opening on said outer surface and an opening on said second of said at least two opposing surfaces,

at least one blank opening on said first of said at least two opposing surfaces;

at least one blank opening on said second of said at least two opposing surfaces;

a first sealing annulus for sealing said openings on said first of said at least two opposing surfaces, and

a second sealing annulus for sealing said openings on said second of said at least two opposing surfaces;

a first pin isolation valve, said first pin isolation valve disposed to move along the centerline of said isolation valve,

said first pin isolation valve movably disposed so as to be capable of fluidically communicating with said at least one blank opening on said first of said at least two opposing surfaces,

said first pin isolation valve movably disposed so as to be capable of fluidically communicating with said flow through conduit having an opening

on said outer surface and an opening on a second of said at least two opposing surfaces;

a second pin isolation valve, said second pin isolation valve disposed to move along the centerline of said isolation valve,

said second pin isolation valve movably disposed so as to be capable of fluidically communicating with said at least one blank opening on said second of said at least two opposing surfaces,

said second pin isolation valve movably disposed so as to be capable of fluidically communicating with said flow through conduit having an opening on said outer surface and an opening on said second of said at least two opposing surfaces; and

a linear flow through injection valve, said injection valve comprising:

a stationary member;

a movable member;

said stationary member and said movable member interfacing at a surface, said movable member disposed to slide along said surface;

a chamber disposed between said stationary member and said movable member, said chamber bounded by said surface;

said movable member having a first flow through conduit having a first opening interfacing with said chamber and a second opening on a surface of said movable member not interfacing with said chamber,

said movable member having a second flow through conduit having a first opening interfacing with said chamber and a second opening on a surface of said movable member not interfacing with said chamber,

said movable member having a third flow through conduit having a first opening and a second opening each on a surface of said movable member interfacing with said chamber;

said movable member having a fourth flow through conduit having a first opening and a second opening each on a surface of said movable member interfacing with said chamber; and

a second blank opening on said surface bounding said chamber.

54. The multiple valve according to claim 53, wherein said linear flow through injection valve further comprises:

at least one of a (a) first pin isolation valve, (b) second pin isolation valve, (c) third pin isolation valve, and (d) fourth pin isolation valve;

said first pin isolation valve having an internal conduit,

said first pin isolation valve disposed within an opening within said stationary member interfacing with said chamber so that said internal conduit of said first pin isolation valve is movably disposed to be in fluidic communication with said first opening on a first flow through conduit of said movable member,

said internal conduit of said first pin isolation valve movably disposed to be in fluidic communication with said first opening of said third fluid flow through conduit,

said second pin isolation valve having an internal conduit,

said second pin isolation valve disposed within an opening within said stationary member interfacing with said chamber so that said internal conduit of said second pin isolation valve is movably disposed to be in fluidic communication with said first opening on a second flow through conduit of said movable member,

said internal conduit of said second pin isolation valve movably disposed to be in fluidic communication with said second opening of said third flow through conduit,

said third pin isolation valve having an internal conduit,

said third pin isolation valve disposed within an opening within said stationary member interfacing with said chamber so that said internal conduit of said third pin isolation valve is movably disposed to be in fluidic communication with said first opening of said fourth flow through conduit,

said internal conduit of said third pin isolation valve movably disposed to be in fluidic communication with said first opening of said first flow through conduit,

said fourth pin isolation valve having an internal conduit,

said fourth pin isolation valve disposed within an opening within said stationary member interfacing with said chamber so that said internal conduit of said fourth pin isolation valve is movably disposed to be in fluidic communication with said second opening of said fourth flow through conduit,

said internal conduit of said fourth pin isolation valve movably disposed to be in fluidic communication with said first opening on said second flow through conduit.

55. The multiple valve according to claim 53, wherein said linear flow through injection valve further comprises a housing enclosing said stationary member and said movable member.

56. The multiple valve according to claim 54, wherein said linear flow through injection valve further comprises a housing enclosing said stationary member and said movable member and at least one of said pin isolation valves, said internal conduit of said at least one pin isolation valve fluidically coupled to a conduit penetrating said housing.

57. The multiple valve according to claim 53, wherein said linear injection valve further comprises drive means for moving said movable member.

58. The multiple valve according to claim 57, wherein said drive means is a linear motor.

59. The multiple valve according to claim 54, wherein either of said first and second pin isolation valves of said linear injection valve is fluidically coupled to a sample loop of a high pressure liquid chromatography (HPLC) system.

60. The multiple valve according to claim 54, wherein either of said third and fourth pin isolation valves of said rotary isolation valve is fluidically

coupled to a pump supplying high pressure liquid to a high pressure liquid chromatography (HPLC) system.

61. The multiple valve according to claim 54, wherein either of said third and fourth pin isolation valves of said rotary isolation valve is fluidically coupled to a column discharging high pressure liquid from a high pressure liquid chromatography (HPLC) system.

62. The multiple valve according to claim 55, wherein said housing of said linear injection valve is capable of retaining pressure greater than atmospheric pressure.

63. The multiple valve according to claim 56, wherein said housing of said linear injection valve is capable of retaining pressure greater than atmospheric pressure.

64. The multiple valve according to claim 53, wherein said movable member is comprised of PEEK (polyetheretherketone) blend.

65. The multiple valve according to claim 53, wherein said first pin isolation valve of said flow through isolation valve is fluidically coupled to said third pin isolation valve of said flow through injection valve.

66. The multiple valve according to claim 53, wherein said second pin isolation valve of said rotary flow through isolation valve is fluidically coupled to said fourth pin isolation valve of said rotary flow through injection valve.

67. The multiple valve according to claim 53, wherein said rotor further comprises

a rotor clamp having an outer surface and an inner surface, the inner surface surrounding at least a portion of the outer surface of said rotor,

a first opening on the outer surface of said rotor clamp penetrating said rotor clamp to coincide with said first opening on said outer surface of said rotor, and

a second opening on the outer surface of said rotor clamp penetrating said rotor clamp to coincide with said second opening on said outer surface of said rotor.

68. The multiple valve according to claim 67, wherein said rotary flow through isolation valve further comprises at least one of a (a) third pin isolation valve, and (b) fourth pin isolation valve;

said third pin isolation valve having an internal conduit, said third pin isolation valve disposed within said first opening on said outer surface of said rotor clamp so that said internal conduit of said third pin isolation valve is disposed to be in fluidic communication with said opening on said outer surface of said flow through conduit having an opening on said outer surface and an opening on said first of said at least two surfaces intersecting said outer surface of said rotor,

said fourth pin isolation valve having an internal conduit, said fourth pin isolation valve disposed within said second opening on said outer surface of said rotor clamp so that said internal conduit of said fourth pin isolation valve is disposed to be in fluidic communication with said opening on said outer surface of said flow through conduit having an opening on said outer surface and an opening on said second of said at least two surfaces intersecting said outer surface of said rotor.

69. The multiple valve according to claim 68, wherein at least one of said third and fourth pin isolation valves of said rotary flow through isolation valve is disposed within one of said openings on said outer surface of said rotor clamp by means of a threaded compression connection.

70. The multiple valve according to claim 67, wherein said rotor clamp further comprises drive means for driving said rotor to rotate around the axis of rotation of said rotor.

71. The multiple valve according to claim 70, wherein said rotor clamp drive means comprises a gear drive operator.

72. The multiple valve according to claim 70, wherein said rotor clamp drive means comprises a handle operator.

73. The multiple valve according to claim 53, wherein said interfacing surface between said stationary member and said movable member of said linear injection valve is sealed by at least one lip seal.

74. The multiple valve according to claim 54, wherein at least one of said openings of said pin isolation valves of said linear injection valve is sealed by a lip seal.

75. The multiple valve according to claim 73 wherein said lip seal is self-energizing.

76. The multiple valve according to claim 74, wherein said lip seal is self-energizing.

77. The flow through isolation valve according to claim 53, wherein said movable member consists of at least one of (a) metal, (b) polymer, and (c) sapphire.

78. The multiple valve according to claim 53, wherein at least one of said valve ends comprises:

a stator enclosing said at least one pin isolation valve,
said stator adjacent to said rotor;

a sealing layer enclosed within said stator and enclosing said at least one pin isolation valve for sealing said at least one pin isolation valve;

a Belleville spring washer;

a Belleville spring;

a load washer; and

a spherical nut,

said Belleville spring washer, said Belleville spring, said load washer and said spherical nut axially arranged to impose an axial force for sealing said sealing layer enclosing said pin isolation valve.

79. The multiple valve according to claim 78, wherein said sealing layer is comprised of at least one of PEEK (polyetheretherketone) and PTFE (polytetrafluorethylene)

80. The multiple valve according to claim 53, wherein said rotor is comprised of PEEK blend.

81. The multiple valve according to claim 67, wherein said rotor clamp is comprised of stainless steel.

82. The multiple valve according to claim 81, wherein said stainless steel is ASTM Type 316 stainless steel.

83. A multiple valve comprised of:

a housing;

a linear flow through isolation valve disposed within said housing, said isolation valve comprising

a stationary member;

a movable member;

said stationary member and said movable member interfacing at a surface, said movable member disposed to slide along said surface;

a chamber disposed between said stationary member and said movable member, said chamber bounded by said surface;

said movable member having a first flow through conduit having an opening interfacing with said chamber and an opening on a surface of said movable member not interfacing with said chamber,

said movable member having a second flow through conduit having an opening interfacing with said chamber and an opening on a surface of said movable member not interfacing with said chamber,

a first blank opening on said surface bounding said chamber, and

a second blank opening on said surface bounding said chamber; and

a rotary flow through injection valve disposed within said housing for isolation of the fluid flow to a downstream receptacle,

said injection valve disposed around a an axis of rotation oriented in said injection valve comprising:

at least two opposing valve ends disposed around the centerline;

a rotor disposed between said valve ends, a centerline of said rotor being one of parallel and coincident with the centerline of said injection valve, said rotor disposed such that orientation of said rotor can change by rotation around the centerline of said rotor,

said rotor having

an outer surface,

at least two opposing surfaces each intersecting said outer surface,

a first flow-through conduit having an opening on a first of said at least two opposing surfaces and an opening on a second of said at least two opposing surfaces;

a second flow-through conduit having an opening on a first of said at least two opposing surfaces and an opening on a second of said at least two opposing surfaces;

a flow through conduit having an opening on said outer surface and an opening on said first of said at least two opposing surfaces;

a flow through conduit having an opening on said outer surface and an opening on said second of said at least two opposing surfaces;

a first sealing annulus for sealing said openings on said first of said at least two opposing surfaces;

a second sealing annulus for sealing said openings on said second of said at least two opposing surfaces;

a first pin isolation valve, said first pin isolation valve disposed to move parallel to the centerline of said injection valve, said first pin isolation valve movably disposed so as to be capable of fluidically communicating with said opening on said first flow-through channel on said first of said at least two opposing surfaces,

said first pin isolation valve movably disposed so as to be capable of fluidically communicating with said flow through conduit having an opening on said outer surface and an opening on said second of said at least two opposing surfaces;

a second pin isolation valve, said second pin isolation valve disposed to move parallel to the centerline of said injection valve,

said second pin isolation valve movably disposed so as to be capable of fluidically communicating with said opening on said first flow-through channel on said second of said at least two opposing surfaces;

said second pin isolation valve movably disposed so as to be capable of fluidically communicating with said flow through conduit having an opening on said outer surface and an opening on said second of said at least two opposing surfaces;

a third pin isolation valve, said third pin isolation valve disposed to move parallel to the centerline of said injection valve,

said third pin isolation valve movably disposed so as to be capable of fluidically communicating with said opening on said second flow-through channel on said first of said at least two opposing surfaces,

said third pin isolation valve movably disposed so as to be capable of fluidically communicating with said flow through conduit having an opening on said outer surface and an opening on said second of said at least two opposing surfaces; and

a fourth pin isolation valve, said fourth pin isolation valve disposed to move parallel to the centerline of said injection valve,

said fourth pin isolation valve movably disposed so as to be capable of fluidically communicating with said opening on said second flow-through channel on said second of said at least two opposing surfaces,

said fourth pin isolation valve movably disposed so as to be capable of fluidically communicating with said flow through conduit having an opening on said outer surface and an opening on said second of said at least two opposing surfaces.

84. The multiple valve according to claim 83, wherein said linear flow through isolation valve further comprises:

at least one of a (a) first pin isolation valve, (b) second pin isolation valve, (c) third pin isolation valve, and (d) fourth pin isolation valve;

said first pin isolation valve having an internal conduit,

said first pin isolation valve disposed within an opening within said stationary member interfacing with said chamber so that said internal conduit of said first pin isolation valve is movably disposed to be in fluidic communication with said first opening on a first flow through conduit of said movable member,

said internal conduit of said first pin isolation valve movably disposed to be in fluidic communication with said first blank opening on said surface bounding said chamber,

said second pin isolation valve having an internal conduit,

said second pin isolation valve disposed within an opening within said stationary member interfacing with said chamber so that said internal conduit of said second pin isolation valve is movably disposed to be in fluidic communication with said first opening on a second flow through conduit of said movable member,

said internal conduit of said second pin isolation valve movably disposed to be in fluidic communication with said second blank opening on said surface bounding said chamber,

said third pin isolation valve having an internal conduit,

said third pin isolation valve disposed within an opening within said stationary member interfacing with said chamber so that said internal conduit of said third pin isolation valve is movably disposed to be in fluidic communication with said first opening of said third flow through conduit, said internal conduit of said third pin isolation valve movably disposed to be in fluidic communication with said first blank opening on said surface bounding said chamber,

said fourth pin isolation valve having an internal conduit,

said fourth pin isolation valve disposed within an opening within said stationary member interfacing with said chamber so that said internal conduit of said fourth pin isolation valve is movably disposed to be in fluidic communication with said second opening of said third flow through conduit, said internal conduit of said fourth pin isolation valve movably disposed to be in fluidic communication with said second blank opening on said surface bounding said chamber.

85. The multiple valve according to claim 83, wherein said linear flow through isolation valve further comprises a housing enclosing said stationary member and said movable member.

86. The multiple valve according to claim 84, wherein said linear flow through isolation valve further comprises a housing enclosing said stationary member and said movable member and at least one of said pin isolation valves, said internal conduit of said at least one pin isolation valve fluidically coupled to a conduit penetrating said housing.

87. The multiple valve according to claim 83, wherein said linear isolation valve further comprises drive means for moving said movable member.

88. The multiple valve according to claim 87, wherein said drive means is a linear motor.

89. The multiple valve according to claim 84, wherein either of said first and second pin isolation valves of said rotary injection valve is fluidically coupled to a sample loop of a high pressure liquid chromatography (HPLC) system.

90. The multiple valve according to claim 84, wherein either of said third and fourth pin isolation valves of said linear isolation valve is fluidically coupled to a pump supplying high pressure liquid to a high pressure liquid chromatography (HPLC) system.

91. The multiple valve according to claim 84, wherein either of said third and fourth pin isolation valves of said linear isolation valve is fluidically coupled to a column discharging high pressure liquid from a high pressure liquid chromatography (HPLC) system.

92. The multiple valve according to claim 85, wherein said housing of said linear isolation valve is capable of retaining pressure greater than atmospheric pressure.

93. The multiple valve according to claim 86, wherein said housing of said linear isolation valve is capable of retaining pressure greater than atmospheric pressure.

94. The multiple valve according to claim 83, wherein said movable member is comprised of PEEK (polyetheretherketone) blend.

95. The multiple valve according to claim 83, wherein said first pin isolation valve of said linear isolation valve is fluidically coupled to said third pin isolation valve of said rotary injection valve.

96. The multiple valve according to claim 83, wherein said second pin isolation valve of said linear isolation valve is fluidically coupled to said fourth pin isolation valve of said rotary injection valve.

97. The multiple valve according to claim 83, wherein said rotor further comprises

a rotor clamp having an outer surface and an inner surface, the inner surface surrounding at least a portion of the outer surface of said rotor ,

a first opening on the outer surface of said rotor clamp penetrating said rotor clamp to coincide with said first opening on said outer surface of said rotor, and

a second opening on the outer surface of said rotor clamp penetrating said rotor clamp to coincide with said second opening on said outer surface of said rotor.

98. The multiple valve according to claim 97, wherein said rotary flow through injection valve further comprises at least one of a (a) third pin isolation valve, and (b) fourth pin isolation valve;

said third pin isolation valve having an internal conduit, said third pin isolation valve disposed within said first opening on said outer surface of said rotor clamp so that said internal conduit of said third pin isolation valve is disposed to be in fluidic communication with said opening on said outer surface of said flow through conduit having an opening on said outer surface and an opening on said first of said at least two surfaces intersecting said outer surface of said rotor,

said fourth pin isolation valve having an internal conduit, said fourth pin isolation valve disposed within said second opening on said outer surface of said rotor clamp so that said internal conduit of said fourth pin isolation valve is disposed to be in fluidic communication with said opening on said outer surface of said flow through conduit having an opening on said outer surface and an opening on said second of said at least two surfaces intersecting said outer surface of said rotor.

99. The multiple valve according to claim 98, wherein at least one of said third and fourth pin isolation valves is disposed within one of said openings on said outer surface of said rotor clamp by means of a threaded compression connection.

100. The multiple valve according to claim 97, wherein said rotor clamp further comprises drive means for driving said rotor to rotate around the centerline of said rotor.

101. The multiple valve according to claim 100, wherein said rotor clamp drive means comprises a gear drive operator.

102. The multiple valve according to claim 100, wherein said rotor clamp drive means comprises a handle operator.

103. The multiple valve according to claim 83, wherein at least one of said valve ends comprises:

a stator enclosing said at least one pin isolation valve,
said stator adjacent to said rotor;

a sealing layer enclosed within said stator and enclosing said at least one pin isolation valve for sealing said at least one pin isolation valve;

a Belleville spring washer;

a Belleville spring;

a load washer; and

a spherical nut,

said Belleville spring washer, said Belleville spring, said load washer and said spherical nut axially arranged to impose an axial force for sealing said sealing layer enclosing said pin isolation valve.

104. The multiple valve according to claim 103, wherein said sealing layer is comprised of at least one of PEEK (polyetheretherketone) and PTFE (polytetrafluorethylene)

105. The multiple valve according to claim 83, wherein said rotor is comprised of PEEK blend.

106. The multiple valve according to claim 97, wherein said rotor clamp is comprised of stainless steel.

107. The multiple valve according to claim 106, wherein said stainless steel is ASTM Type 316 stainless steel.

108. The multiple valve according to claim 83, wherein said interfacing surface between said stationary member and said movable member of said linear isolation valve is sealed by at least one lip seal.

109. The multiple valve according to claim 84, wherein at least one of said openings of said pin isolation valves of said linear isolation valve is sealed by a lip seal.

110. The multiple valve according to claim 108 wherein said lip seal is self-energizing.

111. The multiple valve according to claim 109, wherein said lip seal is self-energizing.

112. The flow through isolation valve according to claim 56, wherein said movable member consists of at least one of (a) metal, (b) polymer, and (c) sapphire.

113. A multiple valve comprised of:

a housing;

a linear flow through isolation valve disposed within said housing, said isolation valve comprising:

a stationary member;

a movable member,

said stationary member and said movable member interfacing at a surface, said movable member disposed to slide along said surface;

a chamber disposed between said stationary member and said movable member, said chamber bounded by said surface;

said movable member having a first flow through conduit having an opening interfacing with said chamber and an opening on a surface of said movable member not interfacing with said chamber,

said movable member having a second flow through conduit having an opening interfacing with said chamber and an opening on a surface of said movable member not interfacing with said chamber,

a first blank opening on said surface bounding said chamber, and

a second blank opening on said surface bounding said chamber; and

a linear flow through injection valve, said injection valve comprising

a stationary member;

a movable member,

said stationary member and said movable member interfacing at a surface, said movable member disposed to slide along said surface;

a chamber disposed between said stationary member and said movable member, said chamber bounded by said surface;

said movable member having a first flow through conduit having a first opening interfacing with said chamber and a second opening on a surface of said movable member not interfacing with said chamber,

said movable member having a second flow through conduit having a first opening interfacing with said chamber and a second opening on a surface of said movable member not interfacing with said chamber,

said movable member having a third flow through conduit having a first opening and a second opening each on a surface of said movable member interfacing with said chamber,

said movable member having a fourth flow through conduit having a first opening and a second opening each on a surface of said movable member interfacing with said chamber,

114. The multiple valve according to claim 113, wherein said flow through injection valve further comprises:

at least one of a (a) first pin isolation valve, (b) second pin isolation valve, (c) third pin isolation valve, and (d) fourth pin isolation valve;

said first pin isolation valve having an internal conduit,

said first pin isolation valve disposed within an opening within said stationary member interfacing with said chamber so that said internal conduit of said first pin isolation valve is movably disposed to be in fluidic communication with said first opening on a first flow through conduit of said movable member,

said internal conduit of said first pin isolation valve movably disposed to be in fluidic communication with said first opening of said third flow through conduit,

said second pin isolation valve having an internal conduit,

said second pin isolation valve disposed within an opening within said stationary member interfacing with said chamber so that said internal conduit of said second pin isolation valve is movably disposed to be in fluidic communication with said first opening on a second flow through conduit of said movable member,

said internal conduit of said second pin isolation valve movably disposed to be in fluidic communication with said second opening of said third flow through conduit,

said third pin isolation valve having an internal conduit,

said third pin isolation valve disposed within an opening within said stationary member interfacing with said chamber so that said internal conduit of said third pin isolation valve is movably disposed to be in fluidic communication with said first opening of said fourth flow through conduit,

said internal conduit of said third pin isolation valve movably disposed to be in fluidic communication with said first opening of said first flow through conduit,

said fourth pin isolation valve having an internal conduit,

said fourth pin isolation valve disposed within an opening within said stationary member interfacing with said chamber so that said internal conduit of said fourth pin isolation valve is movably disposed to be in fluidic communication with said second opening of said fourth flow through conduit, said internal conduit of said fourth pin isolation valve movably disposed to be in fluidic communication with said first opening of said second flow through conduit.

115. The multiple valve according to claim 113, wherein at least one of said flow through isolation valve and said flow through injection valve further comprises a housing enclosing said stationary member and said movable member.

116. The multiple valve according to claim 114, wherein at least one of said flow through isolation valve and said flow through injection valve further comprises a housing enclosing said stationary member and said movable member and at least one of said pin isolation valves, said internal conduit of said at least one pin isolation valve fluidically coupled to a conduit penetrating said housing.

117. The multiple valve according to claim 113, further comprising driving means for driving at least one of said movable members.

118. The multiple valve according to claim 117, wherein said driving means is a linear electric motor.

119. The multiple valve according to claim 113, wherein either of said first and second pin isolation valves of said flow through injection valve is

fluidically coupled to a sample loop of a high pressure liquid chromatography (HPLC) system.

120. The multiple valve according to claim 113, wherein either of said third and fourth pin isolation valves of said flow through isolation valve is fluidically coupled to a pump supplying high pressure liquid to a high pressure liquid chromatography (HPLC) system.

121. The multiple valve according to claim 113, wherein either of said third and fourth pin isolation valves of said flow through isolation valve is fluidically coupled to a column discharging high pressure liquid from a high pressure liquid chromatography (HPLC) system.

122. The multiple valve according to claim 115, wherein said housing of said at least one of said flow through isolation valve and said flow through injection valve is capable of retaining pressure greater than atmospheric pressure.

123. The multiple valve according to claim 116, wherein said housing of said at least one of said flow through isolation valve and said flow through injection valve is capable of retaining pressure greater than atmospheric pressure.

124. The multiple valve according to claim 113, wherein at least one of said movable members is comprised of PEEK (polyetheretherketone) blend.

125. The multiple valve according to claim 113, wherein said interfacing surface between said stationary member and said movable member of at least one of said linear injection valve and said linear isolation valve is sealed by at least one lip seal.

126. The multiple valve according to claim 114, wherein at least one of said openings of said pin isolation valves of said linear valves is sealed by a lip seal.

127. The multiple valve according to claim 125 wherein said lip seal is self-energizing.

128. The multiple valve according to claim 126, wherein said lip seal is self-energizing.

129. The multiple valve according to claim 113, wherein said movable member consists of at least one of (a) metal, (b) polymer, and (c) sapphire.

130. A method of operating a flow through injection valve, the valve comprising:

a movable member, the movable member having

first and second conduits for interfacing with internal conduits of first and second pin isolation valves,

said first and second conduits opening to a surface of said movable member;

a third conduit enabling fluidic communication between said internal conduits of said first and second pin isolation valves;

a fourth conduit enabling fluidic communication between internal conduits of third and fourth pin isolation valves, said third pin isolation valve providing fluid flow, said fourth pin isolation valve exhausting said fluid flow;

(A) wherein the valve is in an initial position of flow isolation such that said third pin isolation valve providing fluid flow is in fluidic communication with said fourth pin isolation valve exhausting said fluid flow,

said first pin isolation valve is in fluidic communication with said first conduit, and

said second pin isolation valve is in fluidic communication with said second conduit;

the method comprising the steps of:

(I) wherein said first pin isolation valve interfaces with said first conduit,

(1) moving said first pin isolation valve away from said first conduit;

(2) moving said movable member,

(3) moving said first pin isolation valve towards said movable member such that said internal conduit within said first pin isolation valve interfaces with said third conduit; and

(II) wherein said second pin isolation valve interfaces with said second conduit,

(1) moving said second pin isolation valve away from said second conduit;

(2) moving said movable member,

(7) moving said second pin isolation valve towards said movable member such that said internal conduit with said second pin isolation valve interfaces with said third conduit, thereby establishing fluidic communication between said first and second pin isolation valves; and

(III) wherein said third pin isolation valve interfaces with said fourth conduit,

(1) moving said third pin isolation valve away from said fourth conduit;

(2) moving said movable member;

(3) moving said third pin isolation valve towards said first conduit to establish fluidic communication with said internal conduit of said third pin isolation valve; and

(IV) wherein said fourth pin isolation valve interfaces with said fourth conduit,

(1) moving said fourth pin isolation valve away from said fourth conduit;

(2) moving said movable member;

(3) moving said fourth pin isolation valve towards said second conduit to establish fluidic communication with said internal conduit of said fourth pin isolation valve; and

(B) wherein the valve is in an initial position of flow throughput such that at least one of (a) said third pin isolation valve providing fluid flow interfaces with said first conduit and (b) said fourth pin isolation valve exhausting said fluid flow interfaces with said second conduit,

the method comprising the steps of:

(III) wherein said third pin isolation valve interfaces with said first conduit,

(1) moving said third pin isolation valve away from said first conduit,

(2) moving said movable member, and

(3) moving said third pin isolation valve towards said movable member such that said internal conduit within said third pin isolation valve interfaces with said fourth conduit; and

(IV) wherein said fourth pin isolation valve interfaces with said second conduit,

(1) moving said fourth pin isolation valve away from said second conduit,

(2) moving said movable member, and

(3) moving said fourth pin isolation valve towards said movable member such that said internal conduit within said second pin isolation valve interfaces with said first conduit; and

(V) wherein said first pin isolation valve interfaces with said third conduit,

(1) moving said first pin isolation valve away from said third conduit,

(2) moving said movable member, and

(3) moving said first pin isolation valve towards said movable member such that said internal conduit within said first pin isolation valve interfaces with said first conduit; and

(VI) wherein said second pin isolation valve interfaces with said third conduit,

(1) moving said second pin isolation valve away from said third conduit,

(2) moving said movable member, and

(3) moving said second pin isolation valve towards said movable member such that said internal conduit within said second pin isolation valve interfaces with said second conduit.

131. A method of operating a multiple valve, the multiple valve comprising a flow through isolation valve, the flow through isolation valve comprising:

a movable member, the movable member having

first and second conduits for interfacing with internal conduits of first and second pin isolation valves,

said conduits opening to a surface of said movable member;

first and second blank openings for interfacing with said internal conduits of said first and second pin isolation valves,

(A) wherein the valve is in an initial position of flow isolation such that at least one of (a) said first pin isolation valve providing fluid flow interfaces with said first blank opening and (b) said second pin isolation valve exhausting said fluid flow interfaces with said second blank opening,

the method comprising the steps of:

(I) wherein said first pin isolation valve interfaces with said first blank opening,

(1) moving said first pin isolation valve away from said first blank opening,

(2) moving said movable member, and

(3) moving said first pin isolation valve towards said movable member such that said internal conduit within said first pin isolation valve interfaces with said first conduit opening to a surface of said movable member; and

(II) wherein said second pin isolation valve interfaces with said second blank opening,

(1) moving said second pin isolation valve away from said second blank opening,

(2) moving said movable member, and

(3) moving said second pin isolation valve towards said movable member such that said internal conduit within said second pin isolation valve interfaces with said second conduit opening to a surface of said movable member, and

(B) wherein the valve is in an initial position of flow throughput such that at least one of (a) said first pin isolation valve providing fluid flow interfaces with said first conduit and (b) said second pin isolation valve exhausting said fluid flow interfaces with said second conduit,

the method comprising the steps of:

(III) wherein said first pin isolation valve interfaces with said first conduit,

(1) moving said first pin isolation valve away from said first conduit,

(2) moving said movable member, and

(3) moving said first pin isolation valve towards said movable member such that said internal conduit within said first pin isolation valve interfaces with said first blank opening; and

(IV) wherein said second pin isolation valve interfaces with said second conduit,

(1) moving said second pin isolation valve away from said second conduit,

(2) moving said movable member, and

(3) moving said second pin isolation valve towards said movable member such that said internal conduit within said second pin isolation valve interfaces with said second blank opening; and

the multiple valve comprising a flow through injection valve, the flow through injection valve comprising:

a movable member, the movable member having

first and second conduits for interfacing with internal conduits of first and second pin isolation valves,

said first and second conduits opening to a surface of said movable member;

a third conduit enabling fluidic communication between said internal conduits of said first and second pin isolation valves;

a fourth conduit enabling fluidic communication between internal conduits of third and fourth pin isolation valves, said third pin isolation valve providing fluid flow, said fourth pin isolation valve exhausting said fluid flow;

(A) wherein the valve is in an initial position of flow isolation such that said third pin isolation valve providing fluid flow is in fluidic communication with said fourth pin isolation valve exhausting said fluid flow,

said first pin isolation valve is in fluidic communication with said first conduit, and

said second pin isolation valve is in fluidic communication with said second conduit;

the method comprising the steps of:

(I) wherein said first pin isolation valve interfaces with said first conduit,

(1) moving said first pin isolation valve away from said first conduit;

(2) moving said movable member,

(3) moving said first pin isolation valve towards said movable member such that said internal conduit within said first pin isolation valve interfaces with said third conduit; and

(II) wherein said second pin isolation valve interfaces with said second conduit,

(1) moving said second pin isolation valve away from said second conduit;

(2) moving said movable member,

(7) moving said second pin isolation valve towards said movable member such that said internal conduit with said second pin isolation valve interfaces with said third conduit, thereby establishing fluidic communication between said first and second pin isolation valves; and

(III) wherein said third pin isolation valve interfaces with said fourth conduit,

(1) moving said third pin isolation valve away from said fourth conduit;

(2) moving said movable member;

(3) moving said third pin isolation valve towards said first conduit to establish fluidic communication with said internal conduit of said third pin isolation valve; and

(IV) wherein said fourth pin isolation valve interfaces with said fourth conduit,

(1) moving said fourth pin isolation valve away from said fourth conduit;

(2) moving said movable member;

(3) moving said fourth pin isolation valve towards said second conduit to establish fluidic communication with said internal conduit of said fourth pin isolation valve; and

(B) wherein the valve is in an initial position of flow throughput such that at least one of (a) said third pin isolation valve providing fluid flow interfaces with said first conduit and (b) said fourth pin isolation valve exhausting said fluid flow interfaces with said second conduit,

the method comprising the steps of:

(III) wherein said third pin isolation valve interfaces with said first conduit,

(1) moving said third pin isolation valve away from said first conduit,

(2) moving said movable member, and

(3) moving said third pin isolation valve towards said movable member such that said internal conduit within said third pin isolation valve interfaces with said fourth conduit; and

(IV) wherein said fourth pin isolation valve interfaces with said second conduit,

(1) moving said fourth pin isolation valve away from said second conduit,

(2) moving said movable member, and

(3) moving said fourth pin isolation valve towards said movable member such that said internal conduit within said second pin isolation valve interfaces with said first conduit; and

(V) wherein said first pin isolation valve interfaces with said third conduit,

(1) moving said first pin isolation valve away from said third conduit,

(2) moving said movable member, and

(3) moving said first pin isolation valve towards said movable member such that said internal conduit within said first pin isolation valve interfaces with said first conduit; and

(VI) wherein said second pin isolation valve interfaces with said third conduit,

(1) moving said second pin isolation valve away from said third conduit,

(2) moving said movable member, and

(3) moving said second pin isolation valve towards said movable member such that said internal conduit within said second pin isolation valve interfaces with said second conduit.

132. The method of operating a flow through injection valve according to claim 130, wherein said first and second conduits opening to a surface of said movable member are in fluidic communication with a sample loop of a high pressure liquid chromatography (HPLC) system.

133. The method of operating a flow through injection valve according to claim 130, wherein said first and second pin isolation valves are in fluidic communication with a needle and a syringe of a high pressure liquid chromatography (HPLC) system.

134. The method of operating a flow through injection valve according to claim 130, wherein said third and fourth pin isolation valves are in fluidic

communication with a pump and a column of a high pressure liquid chromatography (HPLC) system,

135. The method of operating a multiple valve according to claim 131, wherein said first and second conduits opening to a surface of said movable member of said flow through injection valve are in fluidic communication with a sample loop of a high pressure liquid chromatography (HPLC) system,

136. The method of operating a multiple valve according to claim 131, wherein said first and second pin isolation valves of said flow through injection valve are in fluidic communication with a needle and a syringe of a high pressure liquid chromatography (HPLC) system,

137. The method of operating a multiple valve according to claim 131, wherein said third and fourth pin isolation valves of said flow through injection valve are in fluidic communication with a pump and a column of a high pressure liquid chromatography (HPLC) system,